THE GENESEE FARMER.

Vol. VI. ROCHESTER, OCTOBER 8, 1836. No. 41.

Published by Luther Tucker.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan 1, or with the half volume, July 1. No subscription taken for less than six months.

☞ THE MONTHLY GENESEE FARMER is made up of selections from this paper, and published on the first of each month, forming, with Title-page and Index, an annual volume of 200 pages, at the low price of FIFTY CENTS a year, *payable always in advance.*

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SATURDAY, OCTOBER 8, 1836.

Notes of our Travels.

In our last paper, we noticed the injurious practice of TOPPING CORN. It in fact is wasting no inconsiderable part of what we have toiled to obtain, as the following experiments, accurately conducted, will show:

The late *John Lorain*, a distinguished writer on agriculture, says: "In the process of topping and blading, one row was left entire, standing between the row which had been topped on the 20th of Aug., and another row which was topped on the 2d of Sept. These rows were cut off by the roots on the 2d of October, and hauled in and set up separately under my own inspection. They were husked and measured on the 8th of November. [1.] Produce of the row that had *not* been topped and stripped, *nine bushels and five eighths* of corn in the ear. [2.] One of the rows which had been topped and stripped, measured *seven bushels and six eighths*; and [3.] the other topped and stripped row measured *seven bushels and three eighths* of corn in the ear."

As the length of these rows was not given, no *definite* idea of the difference can be obtained; but in an experiment made by *William Clark*, jr. of Northampton in Massachusetts, the loss was "*twelve bushels and forty-six pounds per acre;*" from which he deduced that "*about twenty per cent, or one fifth part of the crop is destroyed by cutting the stalks in the way they are usually cut.*"

In one old pasture, we saw stable manure in heaps which seem to have been taken out as early in the season as mid-summer; and how much longer it was to lie there before the sign would come right for spreading and ploughing it under, —we had no way to determine. The proceeding appeared to us, very injudicious. It may not indeed be more so when intended for wheat, than the old practice in some places, of throwing the manure into heaps in the barn-yard for the purpose of *rotting it;* but in both cases there is a very unnecessary waste. If it be said that manure should be hauled out when the farmer has the most leisure, why may we not apply the rule to other kinds of business, and observe where it would land us in *harvest*, or in *seeding-time?* "What is worth doing, is worth doing well." We are strongly disposed to apply this maxim to the management of manures; and we do not believe that a reformation is more needed in any department of the farm.

If all the contents of the barn-yard, are not wanted in the spring, we conceive there is no better way to preserve what remains, than to cover it just as it lies, with rich earth to the depth of an inch or two, and then apply a good coat of lime; or if marl can be obtained, the earth may be omitted. This advice is founded on the fact that *caustic* lime injures putrescent manures when it comes *in contact* with them; but if a thin stratum of earth be interposed, it soon becomes *mild*, and then acts like marl in retaining the fertilizing gases. If the outskirts of the manure are thin however, we would recommend its being thrown inwards, so that the bed may be nearly of an equal thickness, and so that the lime may not be scattered and wasted.

The appearance of different farms in the same neighborhood is sometimes very striking. An experienced traveler may commonly obtain a good idea of the accommodations at an inn, from the aspect of things on the outside; and we presume that quite as correct a judgment can be formed of the inhabitants of a farm-house, by observing the condition of the yards and fences. We allude only to their taste and talents in rural economy. The fences alone afford an index not to be mistaken; and when the *stakes* have become tired of holding up the *riders*—when bushes occupy the fence corners, and the Golden Rod is creeping out from the hedge-row over the old furrows, what shall we say? At least that prosperity is at a stand. But where no rail is seen with one end down on the ground, rotting —where the thistle and mullein find no room— where the fence-corners are mowed as clean as the middle of the meadow, and the door-yard and the barn-yard are kept neat,—we shall risk but little in pronouncing that the occupant possesses energy and intelligence, and that he is on the highway to independence.

A scarcity of fine fruit, is one of the characteristics of our country. Apples it is true are in great plenty and of good kinds; and some individuals have been at the expense of procuring cherries, plums, pears, peaches, and grapes in variety; but the number is small in proportion to our freeholders. At how many houses of our friends, can we always be sure in summer and autumn, to find delicious fruits? We leave this question for our readers to answer.

Smut in Wheat.

There can be no excuse for farmers in these days who have smutty wheat, since the mode of preventing it is so easy and certain, and he who carries smutty wheat to mill or to market, may without scruple be set down as a very lazy or a very careless farmer. The time was in our country, when the cause and the cure were not understood, and smutty wheat was one of the most serious evils the farmer was called to encounter. There seemed to be no alternative, but either to wash all the wheat necessary for bread, or else use such a black, unwholesome, frightful looking compound as smutty flour certainly is, in defiance of all consequences.

Wheat sown on newly cleared land is always more subject to smut than on land that has been longer cultivated; and that sown on what is called muck lands is more liable to be attacked than that sown on dry loamy or gravelly soils. Twenty-five years ago, scarcely a field of wheat was raised that did not contain more or less smut; indeed, to find a crop of wheat free from it, was as rare as it now is to find one containing it. To what is this great and beneficial change owing. Principally we imagine to two causes, after the natural effect of newly cleared land had passed away—greater care in the selection of seed, and the steeping of seed wheat in brine and lime. The annual value of the wheat crop in Western New York alone, by the latter process, is increased to an amount which can only be reckoned by millions.

We believe that Cayuga county farmers have the honor of first introducing the brining and liming of wheat in this section of country, and for years large quantities of their wheat for seed found its way into the eastern and adjoining counties. Gradually their practice spread, and every farmer was able to produce pure wheat, while smut has been almost banished the country. Still there are some men so blind to their true interests as to sow smutty wheat when it comes in their way without preparation, thus doing their utmost to destroy the value of their own crop, infect that of their neighbors, and perpetuate the disease.

That like will produce its like, is not more true of animals, than it is of plants, and the diseases which sometimes infest them. If smutty wheat is sown, nine times out of ten smutty wheat will be produced; and if chess is allowed in the seed sown, there should be no complaint if the reaper fills his arms with sheaves of chess at harvest. Various methods have been resorted to, and experiments tried, to prevent smut, before an effectual remedy was discovered. Washing in pure water was the first resort, but this, though a partial relief, was not a certain cure. Soaking in vitriol water, or water containing arsenic, was found of essential service, but the first corroded the hands, and the latter endangered the health of the sower. A vessel sunk on the coast of Great Britain loaded with wheat, and the cargo being thoroughly soaked was spoilt for flour, and was sold for seed. This wheat was all free from smut, and the grand discovery that a soaking in brine would prevent smut was thus made. It was found however that to be entirely effectual the wheat required to lie in brine so long a time, that unless the temperature was favorable the germinating powers of the wheat was apt to receive injury; hence the decided improvement of soaking in brine for a short time, and then rolling in lime. Two important advantages were gained by this treatment:—first, the wheat was cleared from all smut, and secondly, the lime produced an excellent effect on the wheat sown, answering the purpose of a dressing of lime to the soil, in the least possible quantity, applying it to the very spot and at the very time when it could be most useful. The following table will

show the advantage of preparing seed wheat for sowing, and the effectiveness of different methods. The experiment was made by British agriculturists with great care, and is decisive.

Fourteen equal spaces of ground were sowed with the same seed, and that as foul and black with smut, before preparation, as wheat could well be.

No. bed.	Preparation when sown.	Smut ears.
1....	Without washing,.....	377
2....	Washed in clean water,.....	325
3....	" lime water,.....	43
4....	" lye of wood ashes,...	31
5....	" arsenic,.....	28
6....	Steeped in lime water 4 hours,....	12
7....	" arsenic 4,.....	1
8....	" lye 12,.....	1
9....	" do. 24,.....	0
10....	" lime water 24,.....	0
11....	" arsenic 24,.....	5
12....	" brine 4,.....	6
13....	" do. 24,.....	3
14....	Washed in brine and rolled in quick lime,.....	0

From this experiment it appears 24 hours steeping in lye of wood ashes or lime water will destroy smut, or that washing in brine and rolling in lime is also effectual. We have tried steeping in brine, steeping and rolling in plaster, and steeping and rolling in lime. That rolled in plaster was worse than that sown unprepared, while that rolled in lime was perfectly free. But to save trouble, the best method is to obtain wheat for seed free from infection, and keep it so. If a farmer lends his bags to his neighbor to carry smutty wheat to market or to mill, the contagion will most assuredly reach his own wheat. Smut is a disease, and it is infectious; one of the surest modes of eradicating the evil on a farm, is to keep this fact steadily in mind. We have scarcely seen a smut wheat head in our fields this ten years.

G.

Prevailing Winds.

One of the most unfailing indications in any country, of the general course of the winds, is to be found in the prevailing inclination of the trees, and the disposal of their branches and foliage. Of this every one must be convinced who has ever visited those tropical regions in which the winds usually blow from one point of the compass, or who has even noticed the tops of the *Pinus canadensis*, or common hemlock, for instance, in our own latitudes. That our prevailing winds are from west to south-west, these topmost twigs furnish the most indubitable proof, they being, with scarce an exception, found inclining from east to north-east. The deepest valleys, or the highest hills, rarely allow exceptions to this remark—a fact somewhat remarkable, when we reflect how much currents of air are influenced by the face of the country over which they pass. That our great lakes influence the currents of the winds, is plain to every one who has noticed the forests at the east ends of the Erie and the Ontario. The angle of inclination to the east, both with forest and fruit trees, is greater in these places than elsewhere on the continent, though we did not imagine they were quite so "slantendicular" as a recent traveler has affirmed they are, the trees having, according to him, "an angle of inclination to the east of three horizontal to one vertical foot." The heaviest masses of branches and foliage are also found, when trees grow in exposed situations, on the eastern sides of the trees. To counteract this force of the winds, trees when planted in gardens or orchards, should be set slightly leaning towards the quarter whence they usually blow, a mode which greatly increases their power of resistance.

Within a few years we have seen many apple trees, with a northwestern exposure, seriously injured, if not entirely destroyed, by having the bark started on that side of the tree, in the spring of the year. The cause of this we are unable to divine, unless it is to be attributed to the severe frosts we sometimes experience late in the spring, after the sap has commenced flowing, which by sudden freezing and consequent expansion, has the effect of loosening the bark on the side most exposed to the freezing winds.

G.

The Season.

Extract of a letter from one of our correspondents in Onondaga county, dated Sept. 28:

"The frost of the 5th inst. killed all the vines, a few potatoes excepted, and injured the corn a good deal, but as the stalk was not killed, or the ear frozen, I do not think it will be much more injurious than topping at that early season would have been. It has evidently much improved in hardness since, but will be a poor substitute for good bright corn. Buckwheat was so far advanced, that not more than a third, if so much, was hurt at all. There has evidently been quite a panic on the subject of bread stuffs, and the usual plenty cannot be expected—still, there will be bread enough, and with industry and economy none need fear starvation.

"P. S. I have opened my letter to state, that at daylight this morning the snow was five inches deep, and had evidently settled some. Wind northwardly, and at present foggy. The trees in full foliage, present a most singular spectacle. Verily the season as a whole is unprecedented."

A letter of the same date from another correspondent in the same county, says:

"The corn crop in this vicinity, (county of Onondaga,) will prove to be one of the most inferior order. The season throughout was uncongenial to its growth,—the drouth injured it, and the untimely frost of Sept. 5th came very near giving it a death blow. I cannot suppose its produce in value will be equal to more than a fourth of what might, under favorable circumstances, have been expected. I make nearly the same estimate in regard to the wheat crop."

Large Fleeces.

We meant to have referred last week to the advertisement of the Messrs. HENTIG, of Grosse Isle, Michigan, to be found in this paper. It will be seen that they have two New Leicester bucks, from each of which was sheared over 13 pounds of wool, the past season.

Top-Dressing Grass Lands.

An important fact in regard to this matter, has been communicated to us by an intelligent visitor, viz. *that the same quantity of manure is twice or thrice as beneficial on* YOUNG *as it is on* OLD *meadow.* Plants, like animals, if stinted or half starved when young, seldom acquire great vigor or luxuriance afterwards; the organs of nutrition become adapted to the early supply of food, and cannot be readily enlarged, on its being increased in advanced age. Hence the advantage of employing rich soils for nurseries—of keeping *young* farm stock well—and of applying manures to *young* grass. A gentleman top-dressed some grass lands at one, two and three years old, and he found the benefit to the first, double what it was the second, and treble that shown by the third. The hint is one of some importance to husbandry, and we hope it will be improved upon. The rule *does* hold good in regard to animals.—*Cult.*

Of the different Species of Mineral Manures.

Alkaline Earths, or Alkalies and their Combinations, which are found unmixed with the remains of any organized beings, are the only substances which can with propriety be called fossil manures. The only alkaline earths which have hitherto been applied in this way, are lime and magnesia; though potassa and soda, the two fixed alkalies, are both used to a limited extent in certain of their chemical compounds.

The most common form in which lime is found on the surface of the earth, is in a state of combination with carbonic acid or fixed air. If a piece of limestone or chalk be thrown into a fluid acid, there will be an effervescence. This is owing to the escape of the carbonic acid gas. The lime becomes dissolved in the liquor. When limestone is strongly heated, the carbonic acid gas is expelled, and then nothing remains but the pure alkaline earth; in this case there is a loss of weight; and if the fire has been very high, it approaches to one-half the weight of the stone; but in common cases, limestone, if well dried before burning, do not lose much more than 35 or 40 per cent., or from 7 to 8 parts out of twenty.

When burnt lime is exposed to the atmosphere in a certain time it becomes mild, and is the same substance as that precipitated from lime water; it is combined with carbonic acid gas. Quick lime, when first made, is caustic and burning to the tongue, renders vegetable blues, green, and is soluble, [i. e. dissolves,] in water; but when combined with carbonic acid, it loses all these properties, its solubility, and its taste; it regains its power of effervescing, and becomes the same chemical substance as chalk or limestone. Very few limestones or chalks consist entirely of lime and carbonic acid. The statuary marbles, or certain of the rhomboidal spars, are almost the only pure species; and the different properties of limestones, both as manures and cements, depend upon the nature of the ingredients mixed with the limestone; for the true calcareous elements, the carbonate of lime, is uniformly the same in nature, in properties, and effects, and consists of one proportion of carbonic acid, 41.4, and one of lime, 55. When a limestone does not copiously effervesce in acids, and is sufficiently hard to scratch glass, it contains silicious, (sandy,) and probably aluminous (clayey) earths. When it is deep brown or red, or strongly colored of any of the shades of brown or yellow, it contains oxide of iron. When it is not sufficiently hard to scratch grass, but effervesces slowly, and makes the acid in which it effervesces milky, it contains magnesia. And when it is black, and emits a fœtid smell if rubbed, it contains coaly or bituminous matter. Before any opinion can be formed of the manner in which the different ingredients in limestone modify their properties, it will be necessary to consider the operation of pure lime as a manure.

Quick lime, in its pure state, whether in powder or dissolved in water, is injurious to plants. In several instances grass has been killed by watering it with lime water. But lime, in its state of combination with carbonic acid, is a useful ingredient in soils. Calcareous earth is found in the ashes of the greater number of plants; and exposed to the air, lime cannot long continue caustic, for the reasons that were just now assigned, but soon become united to carbonic acid. When newly burnt lime is exposed to the air, it soon falls into powder; in this case it is called slaked lime; and the same effect is immediately produced by throwing water upon it, when it

heats violently, and the water disappears. Slaked lime is merely a combination of lime, with about one-third its weight of water; i. e. fifty-five parts of lime absorb seventeen parts of water, and is called by chemists *hydrate of lime;* and when hydrate of lime becomes carbonate of lime by long exposure to air, the water is expelled, and the carbonic acid gas takes its place. When lime, whether freshly burnt or slacked, is mixed with any moist fibrous vegetable matter, there is a strong action between the lime and the vegetable matter, and they form a kind of compost together, of which a part is usually soluble in water. By this sort of operation, lime renders matter which was before comparatively inert, nutritive; and as charcoal and oxygen abound in all vegetable matters, it becomes at the same time converted into carbonate of lime.

Mild lime, powdered limestone, marls or chalks, have an action of this kind upon vegetable matter; they prevent the too rapid decomposition of substances already dissolved, but they have no tendency to form soluble matters. It is obvious from these circumstances, that the operations of quick lime and marl, or chalk, depend upon principles altogther different. Quick lime in being applied to lands, tends to bring any hard vegetable matter that it contains into a state of more rapid decompositton and solution, so as to render it a proper food for plants. Chalk and marl, or carbonate of lime, will only improve the texture of the soil, or its relation to absorption; it acts merely as one of its earthy ingredients. Chalk has been recommended as a substance calculated to correct the sourness of land. It would surely have been a wise practice to have previously ascertained the certainty of this existence of acid, and to have determined its nature in order that it might be effectually removed. The fact really is, that no soil was ever yet found to contain any notable quantity of uncombined acid. The acetic and carbonate acids are the only two that are likely to be generated by any spontaneous decomposition of animal or vegetable bodies, and neither of these have any fixity when exposed to the air. Chalk having no power of acting on animal or vegetable substances, can be no otherwise serviceable to land than as it alters its texture. Quick lime, when it becomes mild, operates in the same manner as chalk, but in the act of becoming mild, it prepares soluble out of insoluble matter. Bouillon La Grange says, that gelatine oxygenized becomes soluble, and vegetable extract becomes so from the same cause; now lime has the property of attracting oxygen, and, consequently, of restoring the property of solubility to those substances which have been deprived of it, from a combination of oxygen. Hence the use of lime on peat lands, and on all soils containing an excess of vegetable insoluble matter.—*Grisenthwaite.*

Effects of lime on wheat crops.—When lime is employed upon the land where there is present any quantity of ammonia, which may, perhaps, be imbibed by the leaves of plants, and afterwards undergo some change so as to form gluten. It is upon this circumstrnce, that the operation of lime in the preparation for wheat crops depends; and its efficacy in fertilizing peat, and in bringing into a state of cultivation all soils abounding in hard roots, or dry fibers, or inert vegetable matter.

General principles for applying lime.—The solution of the question whether quick lime ought to be applied to a soil, depends upon the quantity of inert vegetable matter it contains. The solution of the question, whether marl, mild lime, or powdered limestone, ought to be applied, depends upon the quantity of calcareous matter already in the soil. All soils are improved by mild lime, and ultimately by quick lime, which do not effervesce with acids, and sands more than clays. When a soil, deficient in calcareous matter, contains more soluble vegetable manure, the application of quick lime should always be avoided, as it either tends to decompose the soluble matters by uniting to their carbon and oxygen so as to become mild lime, or it combines with the soluble matters, and forms compounds having less attraction for water and the pure vegetable substance. The case is the same with respect to most animal manures, but the operation of the lime is different in different cases; and depends upon the nature of the animal matter. Lime forms a kind of insoluble soap with oily matters, and then gradually decomposes them by separating from them oxygen and carbon. It combines likewise with animal acids, and probably assists their decomposition by abstracting carbonaceous matter from them, combined with oxygen; and consequently must render them less nutritive. It tends to diminish, likewise, the nutritive powers of albumen from the same causes; and always destroys, to a certain extent, the efficacy of animal manures, either by combining with certain of their elements, or by giving to them new arrangements. Lime should never be applied with animal manures, unless they are too rich, or for the purpose of preventing noxious effluvia. It is injurious when mixed with any common dung, and tends to render the attractive matter insoluble. According to Chaptal, lime forms insoluble composts, with almost all animal or vegetable substances; that are soft, and thus destroys their fermentative properties. Such compounds, however, exposed to the continued action of the air, alters in course of time, the lime becomes carbonate, the animal or vegetable matter decomposes by degrees, and furnishes new products as vegetable nourishment. In this view lime presents two great advantages for the nutrition of plants; the first, that of disposing of certain insoluble bodies to form soluble compounds, the second, that of prolonging the action and nutritive qualities of substances, beyond the term which they would retain them if they were not made to enter into combination with lime. Thus the nutritive qualities of blood, as it exists in the compound of lime and blood, known as sugar baker's scum, is moderated, prolonged, and given out by degrees: blood alone applied directly to the roots of plants will destroy them, with few or no exceptions.

Lime promotes fermentation.—In those cases in which fermentation is useful to produce nutriment from vegetable substances, lime is always efficacious. Some moist tanner's spent bark was mixed with one-fifth of its weight of quick-lime, and suffered to remain together in a close vessel for three months: the lime had been colored, and was effervescent; when water was poured upon the mixture, it gained a tint of fawn colored powder, which must have consisted of lime united to vegetable matter, for it burnt when strongly heated, and left a residum of mild lime.

Experiments with Plaister of Paris.

JESSE BUEL, ESQ.—DEAR SIR—I now in conformity wity my promise, send you the result of the various experiments which I have made with Plaster of Paris. Early in the spring I ordered 50 barrels from Oswego, but owing to some unknown cause, they did not reach me till the middle of May. I immediately had six barrels sown on 22 acres of clover and timothy, in a field which had not been half seeded by my predecessor; the seed was sown in the preceding spring on winter wheat--in less than a fortnight the effect was evident, and I cut over two tons an acre where I am certain I should not without the plaster, have cut 15 cwt. The field being large and rather undulating, the sower missed his line in several spots, and on these there was scarcely grass enough to stand the scythe. The field had been cleared more than 20 years, and hardly cropped without ever having been manured--previous wheat crop not over 18 bushels per acre after summer fallow—soil a deep loam rather light than heavy. Having a field of fifteen acres of peas sown after a crop of wheat, which had been much winter killed; on the 20th of May, when the plants were just appearing, I ordered one barrel of plaster to be sown on about four acres thereof, merely to try the effect, which was so great than in less than a month it appeared to have increased the crop at least threefold.—Vexed at having plastered so small a part, when I beheld the result, without expecting to remedy my error in any considerable degree, as the peas were now all more than a foot high and those which had been plastered much higher, I ordered my head man, an excellent seedsman, to sow another barrel at the rate of half a bushel per acre; in less than three weeks these last manured were fully equal to the others, while the five acres unplastered were so inferior that they might be distinguished two miles off, though these were more than an average crop. The plastered peas were so luxuriant that I feared they would neither ripen nor pod well, but they are now nearly all cut, and I find my fears were groundless. An experienced farmer, who for more than 30 years successfully tilled a very extensive farm in the East Lothians of Scotland, walked over the field with me the day before yesterday, and he declared that he never had seen a finer or more productive crop in any country; indeed the ground could scarcely contain more plants or the plants more pods; the tops, however, of the plastered peas continued to grow, and blossom till they were cut, and will make excellent fodder, but the peas were quite ripe nearer the bottom. In a field which had been lightly settled with timothy in 1834, and which last year was scarcely worth mowing, I sowed on three acres of the shallowest and worst part, a barrel of plaster; these produced twice as much as all the rest of the field (7 acres,) and the mowers said I lost eight tons of hay by not plastering the whole. I also sowed half a bushel on an acre of a field which had been left unseeded and produced nothing but natural red top, bent and blue grass; a thick and luxuriant coat of white clover in a short time marked the spot, which was eaten bare by my cattle, and had a very singular appearance in the midst of the coarse grasses which they left untouched. I also found plaster beneficial, though in a less degree, to spring wheat. The soil of the three last mentioned fields is a deep sandy loam, containing a good many lime stones. In my garden my experiments showed with very different results; it contains exactly one acre of deep rich vegetable mould and was never submitted to spade or plough till last September, when it was well manured with long dung, and trench ploughed; last spring it was well dragged and cross ploughed, and afterwards well worked with the cultivator, and the part intended for small seeds dug with the spade; a part having been planted with asparagus, rhubarb and seakale early in last November. I tried plaster here on peas, rhubarb, seakale, onions, carrots, parsneps, turneps, French beans, cellery, melons and potatoes, and on none of these, except the beans, which were evidently, and the potatoes, which were greatly benefited, did it produce any beneficial effects—on the melons it positively operated as a poison, destroying every plant submitted to its influence. Hence it seems that on over rich or highly manured lands, plaster is of little or no benefit, but that its good effects on dry, light soils are most extraordinary, I am thoroughly convinced. I must add that I last week saw a field of oats, the soil of which was a pure running sand, that could not, without such assistance as it received have produced a return of the seed—sown after peas, and yet on six acres thereof, *where the peas had been plastered,* the crop is certainly not less than sixty bushels to the acre, while on the rest of the field it is not worth cutting.

I hope sir, many of your readers will be induced by what I have said, (and I am sure, though I write anonymously, for reasons before stated, that you who know me will vouch for my credibility,) to use this cheap but most valuable manure, and their success, of which I am confident, will highly gratify a sincere well wisher to the agricultural enterprize of your countrymen, and a warm admirer of your own praiseworthy exertions in so good a cause.

COLONUS.

Upper Canada, September 5th, 1836. [*Cult.*

A GOOD ONE.—The following toast was drunk at the Truxton Celebratiou:

"The Plough—its ONE share in a bank of earth is worth TEN in a bank of paper."

COMMUNICATIONS.

Timely Discovery.

BY MERCATOR.

Science has demonstrated that caloric, electricity, magnetism and galvanism, are but different modifications of one and the same thing—the grand agent of all motion, chrystalization and growth. In the shape of caloric it keeps the sun and the center of the earth red hot, and is exceedingly serviceable in roasting turkeys and making turtle soup;—in the form of electricity it crushes the proudest oaks, or dances on the point of a lady's finest cambric needle;—under the modification of magnetism, it points to the north pole, makes young maidens *clairvoyants*, or cures old women's rheumatisms;—and known as galvanism, under the hands of Hare and Silliman it converts charcoal into diamonds, or makes dead men kick furiously. It causes the earth and the planets to wheel around the sun—it bids the aurora borealis to blaze in the northern heavens—it transforms the primitive atoms into the precious stones—and every organized atom owes to it its vitality, from those that constitute the merest animalculæ, to those that form the most lovely and lofty of the creation.

These are the labors imposed on this impalpable, imponderable fluid, by the God of nature, labors neither inconsiderable or trifling; but man has lately taken the matter into his own hand, and manifests a disposition, not altogether unsuccessfully, to manage and wield it at his will. He employs electricity to force the growth of a salad, to destroy barnacles on the bottom of our seventy-fours, to hatch chickens in about as many minutes as it formerly took days, and, oh mirabile dictu! though last not the least in this career of discovery, the process stands revealed of fattening pigs by magnetism, or what amounts to the same thing, on lightning! A Mr. Poyen, a Frenchman we believe, is the inventor or discoverer of this method of "laying on the fat," and the whole process consists, (if we rightly understand the manner in which he has been teaching it to the good folks down east,) in simply rubbing or ventilating the backs of the pigs with an iron hoop. The rapidity of the "taking on" will of course depend on the frequency of the scratchings, and the skill with which they are performed.

Never was a discovery more opportune than this. For a month past the lovers of twelve and a half inch pork have looked exceedingly chop-fallen—the digesters of ham have been of the blue color that indicates a collapse—and farmers who delight in seeing their swine so fat as to "lard the lean earth" they walked upon, have given up the fattening of pork the present year, and placed it among one of the impossible things. The corn and the buckwheat, upon which they had relied, all went to smash on the night of the fifth of September, as all things that are "beautiful and succulent" will, whenever Jack Frost lays his icy fingers prematurely upon them. Peas were not; apple pie cannot be made where neither the apples or the materials for the crust are to be found; there was a little barley, but not half enough to make drink for the beer guzzling bipeds; grass fed pork could never be made the go; and no wonder that farmers and merchants, and buyers and sellers, and coopers and eaters, grew sad, and their faces gathered blackness. Let them cheer up, "genus has riz," they shall all have a *quantum sufficit* of pork yet, or Poyer shall be branded as an impostor.

In the mean time we anticipate a great demand for hoop iron, and stirring times for the hardware folks. Could we be heard by the grunters, we would advise them to prepare for a thorough scratching, since if pork cannot be fattened this way, it is very certain but little will be fattened at all. Success we say to philosophy,—let the scratching or tickling experiment have a fair trial down east, and if it succeeds we will leave planting corn to the Creoles, and convert our hoes into gridirons, snap our fingers at Jack Frost, and forget our leanness in a supply of Virginian larks' wings. MERCATOR.

Seeding of the Canada Thistle.

BY W. W. B.

We are surprised at the indifference and stupidity manifested by many of our farmers in suffering this worst of weeds to produce and scatter its seeds upon their own and their neighbor's grounds. We have seen, this summer, in different places, patches of several rods in extent, and in one case, in Cayuga county, of more than an acre, left unmolested, in the fields and by the way side, with its seed matured and wafted by every wind over the surrounding territory, to make new colonies wherever it finds a favorable lodgment. *Such negligence is unpardonable.* Were the injury done only to the person on whose premises they grow and mature their seed, it would not be so criminal; for if a man has a mind to be such a fool, so totally devoid of sense to his own interest, as to ruin his lands by his carelessness and negligence in this matter, he deserves to suffer by it, and reap the fruits of his folly and negligence, *a plentiful harvest of this curse of the ground.* But this is not the case; he does injustice to his neighbors, by inflicting an injury on them which they are not able to prevent. They may fence against his cattle, but they cannot fence against the seed of his thistles any more than they can against the wind. He does them an injury too for which they have no redress. If his unruly cattle break into their enclosures and destroy their crops, they have their remedy in the provisions of the law, but here they must suffer without redress, for the law touches not this subject. We would respectfully suggest whether this is not a subject worthy of legislative action, and whether there should not be such a law at least as to impose a penalty on those who suffer the Canada thistle to go to seed on their premises. We do not wish to be thought severe, but we do think that our farmers greatly mistake their own interest, and do injustice to the community, by permitting this pestiferous weed to spread unmolested through the country by scattering its seed. W. W. B.

Skinless Oats.

BY W. G.

Two years since I sent to Albany and obtained a small quantity of skinless oats. I sowed them in the spring, and the yield equaled my expectations, but I observed there were more smut heads among them than I had been accustomed to see in common oats. I had enough this season to sow an acre, and they were got in early considering the season, and on a promising piece of ground, as I wished to give them a fair chance. Though much injured by the heavy rains that fell soon after they were sown, they grew very well, but when they came to ear out, it seemed as if they were two-thirds at least smut, and such they appeared at cutting. I have not threshed them yet, but the quantity of *oats* cannot be large. A neighbor of mine, who obtained some the same year, assures me that his are similarly affected, the ears being a very large proportion of them smut. As they were extensively scattered over the country from Albany the same season, it would be well if the results could be communicated to the public, since if they have in general smutted as bad as those in this neighborhood, it would render the propriety of continuing their culture very doubtful, as they must be much superior indeed to the ordinary oat, to bear the liability to such an occasional drawback in the shape of smut. I hope those who have sown the skinless oat will lay before the readers of the Farmer the result of the experiment.

W. G.

From the Farmer and Gardener.

The Grape Culture.

As there are many pro forma descriptions of the cost and the proceeds of a vineyard, I would like to add one to the number, taken down from actual experiment, or from results which are obtained from the natural course of business added to an experience in the cultivation of the vine. I have overlooked descriptions of the cost and returns from a vineyard, which made my heart leap with joyful expectations, but experience shows that too much of these theoretical calculations is falsified. The following, I think, can be relied upon by any one proposing to cultivate the vine.

FIRST YEAR.

Cost of ground per acre $40, (or $20 to $30 for ground, and $10 to $20 for manure,)	$40 00
The Catawba, Isabella, Constantia, and other native vines, throw out long shoots, with much foliage, and therefore the rows are best about 9 feet apart, and each vine 5 feet apart in the row. This gives 996 vines on the acre, to obtain which, 1200 cuttings must be planted, at $3 per hundred,	36 00
Planting, cultivation, &c.	20 00
Cost first year per acre,	$96 00

SECOND YEAR.

Interest on first year, nearly	6 00
1000 rails for stakes, (chestnut or oak.) Chestnut rails last as stakes 12 years; oak rails about 8,	65 00
Fixing stakes, cultivation, bending,	20 00
	$187 00

THIRD YEAR.

Interest,	11 00
Cultivation,	10 00
	$208 00

Thus a vineyard will cost $208 per acre previous to its bearing. Now the building and fixtures necessary for making and preserving the wine are to be added. A vineyard of 5 acres will require a cellar of 30 feet by 20, and at least a frame building the same size above the cellar of one story in height. A cellar and frame building of this kind will cost about $500. The vats and press will cost $150. Thus $650 must be added to $1040; the cost of 5 acres of vineyard amount to $1690, and divided by 5 we have $338 dollars as the expense of one acre of vineyard.

And without a person has hands hired for other cultivation, and has horses, carts, ploughs and manure, without hiring or buying, the expense per acre will considerably exceed $338.

As to the produce of a vineyard I think experience will henceforth demonstrate, that taking one year with another, not more than 200 gallons of wine can be pressed, every vintage, from one acre. For the last 5 years I doubt whether any vineyard has yielded even to that average amount, for in 1831 a heavy frost in May nipped the shoots just springing forth; in 1834 the same thing occurred to a greater degree; in 1835 the last year's wood was winter killed to a great extent; and in 1836 the excessive rains in June when the vines were flowering have deprived the cultivator from one-third to one half of his crop. Calculating the average expense per acre for ten years for propping, pruning, manuring, &c. the vines, and for gathering, pressing and fermenting the produce, together with the price of casks and other necessary and contingent outlays, we have per year about.....$60 00
To which add interest on the cost of vineyard, (338,).....20 00

$80 00

Thus $80 must be paid by the cultivator for 200 gallons of wine, or 40 cts. per gallon. Now the cultivator should receive at least 100 per cent on all outlays, otherwise he had better cultivate wheat and corn which yield more than this amount without one half of the trouble of the vine. Therefore wine is not worthy the attention of the cultivator, without he can obtain 80 cents per gallon for it when new, and about 100 cents when kept 2 or 3 years.

Now the best *Catawba* wine 3 years old is worth $1 per gallon to make it, and I am certain that for wholesomeness and fine flavor this kind of wine is better worth a dollar the gallon than 9-10ths of the wine of the same price to be found in the wholesale wine stores. I mention particularly the Catawba, because that variety of grape seems to me to be the hardiest, and to make a wine of better body and flavor than any other kind, and in this opinion I am supported by the declarations of the late Major *Adlum*, who for many years experimented with a number of varieties of grape vines. A three years old Catawba wine is certainly a beverage of a very superior kind; but excellent wine can be made out of the *Blend*, *Isabella*, and *Alexander*.

The conclusions I draw are these, that if 80 cents a gallon cannot be obtained for wine, the cultivator had better employ his capital in raising grain. This statement will make theoretical calculators start, but it will be borne out by the experience of A PRACTICAL MAN.

New-York Crops-Early Frosts--Drill Husbandry, &c.

To the Editor of the Farmer & Gardener—

SIR—Since I saw you at Baltimore last spring, I have relinquished the hotel in the city and retired to my farm, three and a half miles west, on the great western turnpike.

The season so far has been remarkably cold and inauspicions. The spring was very backwark and wet, which rendered it impossible to get in our seed as early as we could wish by about two or three weeks. Owing to the extreme wet, my corn and potatoes, in low ground, rotted and did not vegetate. To this succeeded a severe drouth, which has retarded the growth of corn, and root crops, generelly, and to cap the climax, on the 21st of August we had a frost severe enough to nip the tops of our corn in low places, as well as beans, potatoes and pumpkin vines. On the 24th we had another frost, which froze the tops of young clover. On the 2d inst., we had another slight frost, since which we have had warm and pleasant weather, with an occasional shower of rain, which has given our pastures a green and healthy appearance.

We were much favored, however, in having good weather in harvesting our hay and grain. My barley turned out well, having, for the first time, put it in with a drill, which I conceive superior to the common practice of sowing broadcast. The broadcast system is a less perfect and less economical mode of cultivation than that of drilling; for the seed cannot be deposited in the soil with the same exactness, in regard to depth and regularity. With the drill, any desired quantity of seed may be sowed to the acre. In light and open soils, drilling has the important advantage of giving the grain a *good hold* of the ground, and giving all the seed the same depth of soil, by which the frost is prevented from throwing out the plants in spring, or the wind from loosening the roots. I used the Norfolk drill, figured in Loudon's Encyclopedia of Agriculture, No. 340. It sows eleven rows at once, about four inches asunder, drawn by two horses, one before the other. It cannot be used on a very uneven or hilly surface, nor where the soil is too full of stones or stumps. It is also used for putting in broom corn, mangel wurtzel, beets, carrots, ruta baga, and any other small seeds, placing the rows at any required distance, from four inches to six feet.

My oats grew too rank and large to yield well, much of it having lodged before heading.

Potatoes have suffered very much from the drouth, of course the product will not be great, more particularly those planted late.

My corn promises a fair crop, notwithstanding all the difficulties it has had to encounter, viz. wet, cold, grub, wire-worm, crows and frost.

I forgot to mention in turn, that my hay crop was a good one, having got in one hundred and thirty-seven large loads, supposed to be at least one hundred tons of good hay.

Although my pastures have been poor in consequence of the severe drouth, my cattle and sheep have done well. My Down sheep are, as usual this time of the year, quite fat. My Bakewell or New Leicesters are also in fine condition. I have sold all my *Down* bucks, except a few lambs—I have two three year, one yearling, and six Bakewell buck lambs, and twenty-five ewes for sale. I have also ten "old fashioned" merino bucks, descended from the famous stock of the late Chancellor Livingston and Col Humphrey, some of them having sheared in June 7½ lbs. of clean washed wool, worth from 60 to 70 cents per lb.

I am now engaged in building my piggery, which, when completed, I think will combine more convenience and economy than any one I have seen or heard of. It is 120 feet long, in the center of which is a boiling house 20 by 25 feet, containing a granary in the second story, and a vegetable cellar underneath. That part designed for the pens is 50 by 18 feet. The pens will be 8 by 13 feet, with a passage in front of four feet, besides the feeding trough. Should it meet my expectations, I intend to give a drawing, with a description of the same, so that others may profit by my experience.

Respectfully, yours,
CALEB N. BEMENT.

Three Hills Farm, near Albany, Sept. 17, 1836.

Manuring of corn Broadcast or in the Hill.

Each of these modes of culture has its advocates, and, as for ourself, we have not *fully* made up our mind with respect to the superiority of either, although we are free to confess, we incline to the belief, that the broadest application of the manure is best: and so far as our judgment may be entitled to consideration, we think it would be found most effective to harrow instead of ploughing it in, the tendency of most manures, except the gaseous parts, being to sink. By broadcasting, the lateral roots, which extend far beyond the stalk in search of food, have a much better opportunity of imbibing nutriment than when applied exclusively to the hill. The ducts or mouths, through which the sustenance of the plant is derived, being at the extreme points of the roots, it stands to reason that none but the shorter ones, which do not extend beyond the body of the manure as applied to the hill, can derive any essential advantage therefrom. Where time and opportunity suits, andmanure is plenty, both applications would be of great advantage, and at all events, a small portion of light vegetable mould and ashes, or a compost of ashes and plaster, or lime, should be put around the plants when they first come up, to give them an impetus at the very onset, as nothing is so beneficial to the future crop as imparting to the young corn a vigorous start at the incipient stage of its growth. No one except those who may have witnessed it, can form any idea of the great use which is to be derived from applying from one to four gills of such composts as we have named, to the corn plants when they first come up; nor can they conceive the amount of increase in the yield of the corn which will be thereby promoted.—*Balt. Far.*

Preserving Potatoes.

INJURIOUS EFFECTS OF THEIR TOPS.

Every body (except Cobbet, and he's dead,) loves potatoes, that is, if in the first place they are ripe, in the second place, well preserved, and in the third place they are well cooked. Without stopping to doubt the abilities of the goodwives of our land in this department of household economy, we will proceed to read their husbands a homily upon the "ways and means" of preserving potatoes as they ought to be. We will suppose then they are ripe, that is, have obtained a fair size, and are mealy and farinaceous when properly cooked. When digging, don't let each boy, or hand, have a pile of his own, where he empties his basket, spreading them out as much as possible upon the ground, in order that each potatoe may feel the full and direct influence of the sun and air. And furthermore, don't let them dig more than can be got in at night, and therefore allowed to be out 12 or 24 hours with nothing over them but a few straggling tops, as a sort of an apology for a covering. But, if we may be allowed to advise in the premises—and we have followed plans, and by some spoiled as good potatoes as ever were grown, by our ignorance or carelessness, or both---we would recommend a cart covered on the top tightly with boards or by an old coverlid, so that the potatoes when put in shall not be exposed at all to the light, and as little as possible to the air, and carried into the celler or bins as soon after they are taken from the hills as they can conveniently. The bins should also be so constructed that potatoes can be excluded from air and light, in short so as to keep them in a similiar state to that which they are in previously to their being dug---that is, secure from the light and air---with a little moisture, and a temperature sufficiently low to keep them from vegetating.

The plan laid down by Mr Barnum, and published in our paper last summer we think is a good one, viz., to make a bin, put some sand or turf at the bottom, cut some sods and line up the sides and ends with them, and when the potatoes are put in, cover them over with sods, and beat them down solid---this keeps them moist and cool, and we doubt not is an excellent plan.

The light has a peculiar action on some potatoes, making them heavy and watery or waxy, and strong or rancid to the taste. It is perhaps not always possible to prevent this, when they have suffered from some disease of their tops, or have been disturbed while growing, or have not a suitable soil. As it regards the tops, it is generally the custom to throw them down and take no further trouble about them. A correspondent in a late number of the Farmer recommends preserving them when they are green for fodder —and another correspondent cautions us against leaving them on the ground, because they form a harbor and breeding place for insects, which will injure the next crop, especially if it be wheat. We know not whether this invariably follows, but we have seen during the past summer several crops of wheat that succeeded a potatoe crop, all of which were injured by some worm or insect. One in particular we recollect, in the neighborhood of our office, a part of which was much injured and very thin, while another end of the same field, and on soil of the same texture, but which had not been preceded by pota-

toes, was very stout and prolific. It is better therefore undoubtedly, either to gather them up and burn them, or throw them into the hog yard for their *sheatships* to manufacture into manure. —*Me. Farmer.*

Beet Sugar.

M. Pedder's Report.—We have before mentioned, that some gentlemen had associated at Philadelphia, and, we might have added, under the style of the "*Beet Sugar Society*," for the purpose of introducing into the United States the culture of the sugar beet; that they had employed Mr. James Pedder to proceed to France to procure the required information, in regard to the culture of the root, the process of manufacture, &c. &c. Contributions were solicited to defray the expenses of the embassy, and one gentleman of our city, noted for liberality, we understand, gave $200, under the impression that the object was *public* good, and that the information to be obtained was to be freely imparted, for public benefit. Mr. James Pedder bas been to France, has sent home seed, and has returned, and the result of his inquiries has been published by the "*Beet Sugar Society of Philadelphia*," in a pamphlet of 40 pages, 8vo., copy right secured, and is offered for sale at the modest price of 50 cents the copy! The pamphlet does not contain more matter than is contained in one number of our Cultivator, which sells at four cents. We have no sort of objection, that the Beet Sugar Society of Philadelphia should speculate in subscriptions, in beet seed, and in the sale of their report —we only want the public to know the matters of fact.

The copy right of the report being thus secured, we are debarred from making extracts, and must content ourselves with a brief summary, and refer the reader to the report for particulars, which, to those who mean to go into the culture and manufacture, is worth fifty cents. In this summary we avail ourselves, too, of the *gratuitous* information furnished by M. Iznard, French Vice Consul at Boston, to the Trustees of the Massachusetts Society for Promoting Agriculture.

The soil most suitable for the beet culture is, according to M. Iznard, one that is deep, light, rather sandy, but rich. Mr. Pedder says a healthy subsoil is indispensable; and that with this prerequisite it may be cultivated on almost any soil. No manure; as beets raised on manured grounds, says M. Iznard, have proved to contain salts detrimental to sugar.

The species of beet.—Iznard says the white German (not the mangel wurtzel) is the best; Pedder says the white Silesian and the rose colored are the only kinds sown in a large way. Chaptal prefers these.

Preparation of the grounds, sowing, &c.—The ground ought to be trench ploughed, and well pulverized. The seed is sown in France the last of April and first of May—from the first to fifteenth May in latitude 42 deg.—in drills from 20 to 24 inches asunder. Mr. Pedder says sow eight pounds seed to the acre.

Cultivation.—Good cultivation, says M. Iznard, is all important, in order to enhance and perfect the saccharine principle, and to facilitate the several processes for obtaining the sugar. This means, thin the plants, extirpate all weeds, and keep the surface of the soil loose. The implements, the cultivator and hand hoe—Chaptal used the plough.

Taking up the crop.—Pedder says, as soon as the roots have completed their growth—September or October. Chaptal says, as soon as their larger leaves begin to turn yellow, as after this the saccharine principle may disappear, in consequence of a new elaboration of juices after maturity, and salt-peter be generated instead thereof. The leaves may be fed to cows, sheep or swine. In Germany they are dried for winter forage. The roots should not be bruised. They are taken up with a spade.

Preserving the crops.—The mode we have recommended for ruta baga, where cellars will not suffice—in trenches upon dry soils, two or two and a half feet broad, two and a half or three feet deep, and as long as you please, crowning the top with roots, covering with sufficient earth, and perforating the crown with a bar to let off the warm or rarified air. Beets suffer from heat as well as from frost.

Profit from culture.—The common price in France, paid by the manufacturer, is ten francs (=to $1,85) the 1,000 pounds. The yield is from 40 to 52 thousand pounds—medium 46,000 the hectare—equal to 85 dollars. The tops will buy the seed. Where the culture and manufacture are connected, and the business managed to the best advantage, Mr. Pedder estimates the cost of the sugar to the manufacturer at four and a quarter cents per pound, taking into the account the value of the cake and molasses for feeding cattle and sheep, and the value of the manure these make.

M. Iznard estimates the benefits which a farmer will derive by the cultivation of one acre with beet for the making of sugar, as follows:

800 lbs. good Muscovado sugar, at 8 cts. per lb.	$64 00
50 galls. molasses, for distilling or feeding, at 16 cents,	8 00
4 tons pumice, or cake, for cattle, $3 per ton,	12 00
1 ton of leaves, or their value as manure,	5 00
Total,	$89 00

The expense of manufacturing, we presume, to be deducted from the above total.

The manufacture of sugar, consists of seven distinct processes, viz: 1. Washing or scraping the roots; 2. rasping or crushing the roots; 3 pressing the pulp by hydraulic press; 4. diffication, or purifying with lime; 5. evaporation, in which process some animal charcoal is added; 6. clarification, during which most of the animal carbon is added; and 7. concentration. When an excess of lime is by accident applied, it is taken up by diluted sulphuric acid, in the proportion of 44 of water to one of acid. We refrain from attempting an abstract of these processes, and of the implements and vessels employed, as it would only tend to embarrass the novice. We refer to the report, or to Chaptal.

Product.—The beet root gives from four to seven, and in one instance Mr. Pedder says, he knows it gave eight and a half per cent. of sugar. This consists of first, second, and third qualities; though it is advisable not to chrystalize the third quality, it being more valuable left in molasses, to be fed with cut straw to cattle. Assuming six per cent. as the medium, and the average crop at 23,000 pounds the acre, the product of an acre is divided by Mr. Pedder as follows:

Sugar, 1st and 2d quality,	2,400 lbs.
Molasses, 2 per cent.	800 lbs.
Cakes, 15 per cent.	6,000 lbs.
	9,200 lbs. per acre.

Value of the cake, &c.—The beet, in all its varieties, is a valuable crop, cultivated merely as food for cattle. By the above estimate it is made to appear, that the acre not only produces 3,200 lbs. of sugar and molasses, but nearly 10,000 lbs. of pumice, or beet cake, *of more value to stock*, as M. Iznard has shown, *than ten thousand pounds of beet root before the sugar and molasses have been extracted.* For the entire beet contains 85 to 90 per cent. of water; the water being expressed from the cake, leaves in it, after pressure, a greater proportion of saccharine matter, as compared to the water, than it contained before pressure. The molasses too, amounting too 800 pounds, fed with cut straw or hay, will go far in subsisting or fattening stock. M. Iznard sold his cake, for feeding cows, higher per cwt. than the price of beets. The cakes are preserved in magazines sunk in the ground, where they are beaten hard and left to ferment, and are used six and nine months thereafter.

Drill barrow.—A drill barrow, for sowing beets, and most other seeds, is described by Mr. Pedder, with eight wheels, in two setts, three being used for beets, or five for wheat. Price of French drill 100 francs. He also speaks of a *Barrow Hoe*, which is pushed forward between the rows, is simple and of great use in row culture; and of a superior *hand hoe*, having a long crooked neck, which permits the weeds to pass over—similar we suspect, to our turnep hoe.

Family Manufacture.—Mr. Pedder saw the family establishment of Mons Lecerf, who obtained a premium for home manufacture. The labor was performed in one of his rooms, and the cost of all his machinery and apparatus did not exceed 500 francs.

Miscellaneous.—The practice of strewing the sheep yards with lime, as mentioned in a late Cultivator, to prevent the foot rot, is common in France. The estimated cost of a sugar establishment, employing 80 men, and producing 110,000 pounds of sugar, $5,200. Rent of lands $8—takes $1,12½ per acre. The season of manufacture lasts from 10th September to 15th April. The cost of cultivating an acre, including rent and taxes, about 110 francs (about $20); labor cheaper than with us.

If the preceding estimates are any where near the truth, and we see no reason to distrust them, they are satisfactorily demonstrative, that the cultivation of beets in the United States for sugar, can will, ere long, be made one of the most important and profitable branches of American husbandry.

The Beet Society propose to import a large quantity of seed. Orders for seed may be sent to Jacob Snyder, jr., Philadelphia.—*Cultivator.*

Dairying.

The profit of a dairy depends as much on the choice of the Cows, as on their being well fed, and on the proper management of the milk. It is intended in this No. to aid the dairy farmer in this selection.

Before offering two extracts from English works which give the external marks of good Cows for the dairy; it is proper to state that the dairy farms in England are supplied with cows by purchase. In England there are farms for the raising of stock, and that furnish the cows for the dairy farms; and farms also for the rearing and fattening of calves for the butcher,—which are supplied with their calves from the dairy farms at the age of two to four days.

Extract—"*For the choice of Cows for dairy Farms.*—The Milk, or Dairy Farmer, should constantly choose such cows as are wide in the horns, thin on the head and neck, dewlap not to pendulous, the carcase deep and flatish, wide (rather pointed) hips, buttocks round and fleshy, legs thin, with short joints, the udder capacious, not fleshy, but extending well backward, the milk rooms large and prominent, and the teats long and large."—*Encyclopedia of Agriculture.*

This communication was made by Dr. Clyne the most eminent Surgeon in Europe, and was intended as directions to improve the breed of stock in general, and is particularly recommended to the farmers of this country, who r ise their own stock, and in what they raise require those qualities, that will answer for labor as well as the dairy. "The external form of domestic animals has been much studied, and the proportions are well ascertained. But the external form is an indication only of internal structure. The principles of improving it, must therefore be founded on a knowledge of the structure, and use of the internal parts.

The Lungs are of the first importance. It is their size and soundness, that the strength, and health of animals, principally depend. The power of converting food into nourishment is in proportion to their size, and therefore, the animal with the largest lungs, has the greatest aptitude to fatten.

The Chest, according to its external form and size, indicates the size of the lungs. The form of the chest should approach to the figure of a cone, having its apex situated between the shoulders, and its base towards the loins. Its capacity depends on its form more than in the extent of its circumference, for where the girt is equal in two animals, one may have larger lungs than the other. A circle contains more than an elipsis of equal circumference. A deep chest, therefore,

is not capacious unless it is proportionally broad.

The Pelvis, is the cavaity formed by the junction of the haunch bones with the bones of the rump. It is essential that this cavity should be large in the female, that she may be enabled to bring forth her young with less difficulty.

The size of the Pelvis is chiefly indicated by the width of the hips, and the breadth of the twist which is the space between the thighs.

The Head should be small, by which the birth is facilitated. The smallness affords other advantages, and generally indicates that the animal is of a good breed.

The length of the Neck should be proportioned to the height of the animal, that it may collect its food with ease.

The Muscles, and the tendons, which are their appendages, should be large ; by which an animal is enabled to travel with greater facility.

The Bones, when large , are commonly considered an indication of strength, but strength does not depend on the size of the bones, but on the muscles. Animals that have been imperfectly nourished during growth, have their bones disproportionably larger Large bones, generally indicate an imperfection in the organs of nutrition.

When the male is much larger than the female, the offspring is generally of an imperfect form. If the female be proportionably larger than the male the offspring is of an improved form. The size of the foetus is generally in proportion to that of the male parent ; therefore when the female parent is disproportionably small, the quantity of nourishment, is deficient, and the offspring has the disproportions of a starveling. The larger female has a larger quantity of milk, and her offspring is more abundantly supplied with nourishment after its birth. For example, if a well formed ram be put to ewes proportionably smaller, the lambs will not be so well shaped as their parents ; but if a small ram be put to large ewes, the lambs will be of an improved form.

The power of the female to supply her offpring with nourishment, is in proportion to her size, and to the power of nourishing herself from the excellence of her constitution."

Color of Cows.—The quality of the milk depends more on the color of the skin, than the hair. A white cow with a yellow skin gives better milk, than a dark colored with a white skin.

The Eye.—A full and bright eye is to be regarded in the choice of an animal, particularly in calves that are to be raised.

The *skin* should have a fine mellow touch, and good hair is very important.

There has been a great difference of opinion in England on the external form that characterizes the most profitable breed for cows. The writer has seen no record of experiments to show the comparative value of the different breeds, the results of which would have settled the various opinions on this subject, and would make this article too lengthy without benefit.

It is therefore proposed to confine the reader's attention to two breeds that have been imported into this country, and to state a few facts to show their fitness for the dairy and labour, and then request a comparison of the external form with Dr. Clyne's views on the subject.

1st. The *improved* Durham Short Horned breed.

The bulls imported into Massachusetts were Denton, Cadebs, and Admiral--and cows of this breed have been imported by J. Hare Powell and selected by Mr. J. Whitaker, without limit in price--cases are now offered to show that this breed are remarkable good milkers, good feeders, and early arrive at maturity.

Mr J. Whitaker had 10 cows which produced daily 296 quarts of milk, and one of these that was 16 years old, gave 26 quarts daily.

Mr. Jonathan Roberts of Pennsylvania had a cow "that produced milk between Thursday morning and Saturday night—3 days, from which 8 lbs. 13 oz. of butter was obtained, at the rate of 20 1-2 lbs. per week." A quart of cream from the same cow gave 1 pound 5 oz. of butter.

Mr. Carpenter of Pennsylvania, reported to the Agricultural Society, that of this breed, "as regards their aptitude to fatten, and their early maturity, I give it as my opinion that they surpass any other breed of cattle I have seen. Gov. Lincoln, formerly Governor of Massachusetts, and many others confirm this statement.

On the weight.—Of six steers, from 18 to 20 months old, produced at the East Lothian United Agricultural Society, one was killed and the four quarters weighed 1653. "A four year old steer when slaughtered weighed 1890. A three year old heifer fed on hay and grass weighed 1280."

This breed has been introduced into this part of the country by Mr. Sandford Howard, and Colonel Green---and the external form is well known to compare with the description of a perfect animal as given by Dr. Clyne.

2. Two bulls and two cows were imported into Ken. Co. from England in 1792. The directions given for the selection were very simillar to those of Dr. Clyne--and one of the bulls afterwards owned by Hon. C. Gore, of Waltham, answered in all his points to Dr. Clyne's description.

The external form of this breed is well known and have been highly approved—and have been well fitted for the dairy, and have a disposition to fatten and for labor.

One cow in five and a half months, gave 202 1-2 lbs. of butter, thirty six of cheese, and about 9 quarts of milk, daily, on an average for fifty days—and during the fifty days, 50 lbs. of butter were made. She was exhibited as a fat cow at Brighton in October, and her form was considered as very superior--her weight at 5 years old, without being stall fed, was 905 lbs.---from the outside of one hip bone to the outside of the other was 24 inches.

A yoke of oxen at the State Cattle Show, girting about 7 feet 2 inches drew 72 cwt.—the cart and the stones in it were weighed.

For draft the Short horned, in England, are not considered as equal to the Herfordshire oxen —but far superior in all other respects.

It is evident from what has been stated, that the more perfect the form, as described by Dr. Clyne the more profitable is the animal, whether for dairy or other purposes.

But to the farmers in this section of the country it is surely the most for their interest to select stock to breed from according to the description given by Dr. Clyne, and particularly as farmers are obliged to raise stock for the purpose of the dairy, labor, and the butcher.

The writer is aware that this article is lengthy but he did not know how to curtail it, and he would have it considered as No. 2, in a serious of papers with the signature of C. V. [*Me. Far.*

Wheat Worm.

We observe in the Genesee Farmer of the 3d of September, an interesting article upon this insect, from the pen of Willis Gaylord, one of the best agricultural writers of our country. Mr. Gaylord closes his paper with the remark, that "since it appears that in many instances the fly is perpetuated by the eggs of worms *enclosed in the wheat sown*, would it not be good policy to use wheat two years or more old for seed, as such wheat, if it were originally affected with the worm, must have lost them by their previous transformation ?" If the egg of the worm *is* deposited on the seed, of which we have strong doubts, it is not *exclusively* so. In 1834, we obtained select seed, from the mouth of the Genesee river. The crop looked very flattering, till the heads were developed ; and yet we estimated that seven-eighths of the crop was subsequently destroyed by the worm. The seed was sown late in October. Last fall we received a sample of wheat from New Jersey, which was sown in our garden. The worm has literally destroyed it all. A few grains of spring wheat from Rome, was sown in our garden late in May. It is now, Sept. 9, in the milk. On a close examination, we do not find any of the worm in it. The seed from Genesee and New Jersey, could not have contained the egg of the insect. Our observation seems to confirm the opinion, that the insect appears about the time that wheat, sown the last of September, or the early spring sown varieties, comes into ear, and that it remains but a few days in the maggot state ; and that the early fall, or late spring sown crops will be most exempt from its attacks. We have used salt and lime, in all the ways suggested, without discovering in them any preventive of the evil.—*Cult.*

Meteorological Table,

KEPT AT ROCHESTER, FOR SEPTEMBER, 1836.

	10 A. M.				10 P. M.			
Days.	therm.	barometer.	winds.	sky.	therm.	barometer.	winds.	sky.
1	68	29,20	N W	cloudy*a*	46	29,55	N	fair
2	56	29,65	N W	fair	49	29,65	N E	do
3	64	29,60	S W	do	62	29,50	S W	do
4	78	29,50	W	do*b*	60	29,50	W	cloudy*c*
5	58	29,65	N E	cloudy	51	29,75	N	fair
6	56	29,80	E	fair	48	29,75	N E	do
7	64	29,75	S W	do	64	29,70	S E	do
8	72	29,65	S	do	68	29,55	S W	do
9	56	29,75	N E	cloudy*c*	52	29,80	N E	cloudy
10	56	29,70	S E	do*c*	62	29,50	S	do*b*
11	62	29,75	N W	fair	58	29,70	N	fair
12	76	29,65	S W	do	70	29,65	E	do
13	86	29,65	S W	do	70	29,75	W	do*d*
14	74	29,85	W	cloudy	60	29,85	N W	do
15	74	29,90	N	fair	65	29,85	N E	do*i*
16	80	29,75	S W	cloudy*c*	68	29,65	N E	do
17	76	29,60	N W	do*c*	62	29,60	N E	do
18	74	29,55	S W	do	73	29,50	S W	do
19	84	29,50	S W	fair	70	29,50	S W	cloudy*d*
20	67	29,65	W	cloudy	54	29,75	N W	fair
21	66	29,80	S W	fair	60	29,70	N	do
22	72	29,60	S W	cloudy*d*	65	29,55	S W	cloudy *h*
23	70	29,50	N E	do	69	29,55	W	fair
24	50	29,76	W	fair	57	29,50	N W	do
25	56	29,65	N W	do	48	29,70	N W	do
26	58	29,55	W	do	54	29,55	W	do
27	50	29,00	N W	cloudy*e*	36	29,15	N	cloudy*k*
28	43	29,25	W	fair*f*	40	29,40	N W	do*l*
29	50	29,45	W	do*g*	38	29,60	N W	do*m*
30	48	29,65	W	cloudy	50	29,60	W	do

MEAN.—Ther. 61.3—Bar. 29.61—Rain 2.8 in.

a Rains copiously—*b* thunder showers—*c* rainy —*d* showers—*e* rainy, high winds—*f* snow, sleet & rain—*g* white frost—*h* rainy all day—*i* spring water 58°——*k* very blustering—*l* 1 in. snow—*m* snow and rain.

Garden Seeds, Trees, &c.

WM. PRINCE & SONS, Proprietors of the Linnæan Garden and Nurseries, near New York, offer to the public the most extensive collection of Garden, Agricultural and Flower Seeds to be found in the Union.

They will supply venders on the most favorable terms, both as to prices and credit, and they will also enter into such engagements relative to Agencies for the sale of their Trees, Plants, Bulbous Roots, &c., as cannot fail to be highly advantageous to their correspondents. The Seeds will be supplied by the pound and bushel at low prices, or they will be furnished to any extent, put up in small papers and labelled ready for retailing, on which a large discount will be allowed. Specimen beds of the different seeds are growing for inspection, whereby their excellence and accuracy are proved. 3000 lbs. Red, Yellow, White, Silver Skinned, and Madeira Onion seed just ready for delivery. 100,000 Chinese Morus Multicaulis at $25 to $80 per hundred. 15,000 Broad leaved Florence Mulberry at $12 to $15 per hundred. and also above 100,000 White Italian do., at $30 to $80 per thousand according to size. Fruit and Ornamental Trees of every description, Flowering Shrubs, Bulbous Flowering Roots, splendid Double Dahlias, Green House Plants, &c., priced Catalogues of which will be sent per mail to every applicant. The proprietors of Nurseries, and those who wish to establish new Nurseries will be dealt with at a liberal discount.

N. B.—1500 lbs. Finest Early York, Drumhead, savoy, and other Cabbages. (new crop) just received.

Flushing, October 8th, 1836. 3t

Experiments on Grasses needed.

Have we, do we cultivate all the kinds and the best kinds of fodder that the vegetable kingdom can afford? This is a question of some importance to the farmer, and yet it is one which is very little thought of by the majority of people who should take the interest in it.

Formerly, very little attention was paid to the cultivation of Grasses of any kind. The Farmer contented himself with cutting whatever sprung up spontaneously, but at present there are a few kinds which are considered indispensible in the common routine of agricultural labour. It is not many years since Timothy Hurd introduced the culture of what is now called Timothy, or Herd's grass.

The clover culture was introduced into this country, probably by the Dutch, it having proved a valuable crop in their country, and perhaps it was from this circumstance that it used to be called in some places, even within our remembrance, "Flander's," instead of clover.

As Nature has adapted peculiar vegetables for peculiar soils—one kind flourishing strong and luxuriantly in one sort of soil, and perishing or languishing in another, it seems to be a part of good policy to follow her precepts and study her laws. That all is not known yet respecting this branch of husbandry is evident from facts of recent occurrence. It is but recently that the fact was discovered in New Hampshire, and made known by Mr. Robinson of Portsmouth, that the common Ribbon or striped grass was eminently constituted to grow in wet boggy places. Our friend J. H. J. of Peru, sent us, as we noticed in a former volume, a species of aquatic grass which yields abundantly in wet situations, and which his cattle will pick out in the winter, from other kinds, speaking in language that cannot be misunderstood, that they prefer it because it is better.

By thus observing the operations of the animals and the growth and nature of the grasses much may yet be learned in regard to them, which will be in the highest degree profitable to us.

In regard to laying down lands for pasturage we are sometimes extremely negligent in not seeding with a suitable variety. It is well known that different grasses have different times of coming to maturity. Some spring up and ripen early, others succeed, and some are very late. Instead however of regarding this fact, we generally lay our lands down with clover and herd's grass, and perhaps a little red top. The consequence is, our pastures are apt to fail before the season is out.

Whereas if they were carefully stocked down with a variety, regard being had to the different times of maturity, a constant succession might be expected.—*Maine Farmer.*

Morals of Gardening.

We have long believed that he deserves well of the community who can provide an amusement for the young which shall at once be free from a bad moral tendency—possessing sufficient interest in itself to take the whole attention for the time away from the pursuit of doubtful character,—and leave the mind refreshed and prepared for the relish of those sober duties of life for which too many of our amusements create an aversion.

Without claiming much credit for the discovery, we think Horticulture, or, if you please, Floriculture, to be of this class. If this should be read by any one who has been accustomed to send his children for some misdemeanor into a *forest of weeds*, and to compel them to work their way for an hour, as a punishment—in him it may excite a smile, that we talk of the thing as an amusement. We are not startled, however, at such a feeling; for we are clearly convinced that it is possible---nay easy so to interest, young persons of both sexes, in the laying out well-ordering, and even weeding a garden, that it shall be to them a pleasent way of spending time Children naturally love flowers, and early give signs of their interest, and only need the encouragement of parents to show their enthusiasm in "shape and action." If encouraged by the interest and occasional supervision of their parents they will delight to spend much of their leisure time amid the scenes---to all intents of their own creation. The exercise conduces to their health, and it gives ample scope for the cultivation of their taste in their choice of flowers, of their own invention in laying out and designing, and in adopting expedients for the preservation, and propagation of various kinds of plants, &c. It induces that susceptibility to enjoy the works of nature, which leads the mind to reflect with interest on the being and character of nature's God. It has been said that an "undevout Astronomer is mad"—so is an undevout, unthinking Florist. God is as manifest in the beautiful flower that charms and delights, as he is in the more grand, but not more wonderful parts of his creation.—*Essex North Register.*

Bread Stuffs.

Agents are said to have arrived in Liverpool and commenced buying up wheat for the American market. The Philadelphia Sentine' says that this, though of rare occurrence, has happened twice within the recollection of the editor.—*Balt. Amer.*

It will be seen by the above paragraph that the failure of the wheat crop in our country has given a spur to mercantile enterprize, and that the deficiency in our own crop will likely be made up by importations from Europe. This will act as a most seasonable relief to the people at large, while all the wheat which can thus be received cannot possibly prevent farmers from getting good prices for their produce; for a verity there is no period within 30 years, that we recollect of, when there has been so marked a failure of the wheat crop,—and from our public as well as private advices, we are led to believe that the corn crop will prove nearly a failure, it being less than half an average one throughout the country. The rye crop, all admit, has likewise been a disastrous failure, except in some districts which are too limited in extent to exert any thing like a counteracting influence upon the general scarcity of bread-stuffs, that all apprehend.—*Farmer and Gardener.*

RUSSIAN SERFS.—Prince Sheremetoff, who is said to have 120,000 slaves on his estates, has generally in his retinue, when in Moscow, nearly 1000, comprising servants, musicians, commedians, carpenters, builders, tailors, mechanics, and artists of all kinds. Most of the slaves migrate with the nobles in summer to their country seats.

25,000 Mulberry Trees.

WE have 25,000 White Italian Mulberry Trees 3 years old, which we will sell at $25 per 1000, or $3 per 100. If 5000 or upwards are taken, a deduction will be made.

REYNOLDS & BATEHAM,
sept 3 Rochester Seed Store.

To Farmers, Breeders and Others.

THE subscribers would respectfully inform those pursuing any of the above branches of business, that they have just imported from Holderness, in Yorkshire, the prize bull Cottingham, of the pure improved Short Horn breed, which has been selected with great care from the stock of that well known breeder, Mr. Collins, of Danthorpe, in Holderness. Gentlemen wishing to stock their farms with an improved breed, are requested to make early application, as he will be limited to a certain number of cows this his first season.

COTTINGHAM,

Was bred by Mr. Collins, of Danthorpe, Yorkshire, England,—is of a hazel and white color. He was got by Collins' Invincble, (who has obtained the premium 7 successive years at the Holderness Agricultural Show,) his dam by Jackson's Rainbow, grand-dam by Strickland's Fusileer, great grand-dam by Harding's noted bull the Baronet, who was sold for £640 sterling, to go abroad.

The subscribers have also just imported 2 new Leicester Rams, which sheared last spring thirteen pounds one ounce of wool each, which are for sale or to be let for the season, on reasonable terms.—Applications, if by letter, post paid.

Signed, GEORGE HENTIG,
CHARLES HENTIG.

Grosse Isle, Monqungon, Michigan, Sept. 22, 1836. } oct 1-f3t

20,000 GENUINE Morus multicaulis, or Chinese Mulberry, of one and two years' growth, by the dozen, hundred or thousand.

Also—30,000 White *M*ulberry, of one and two years' growth—for sale by ASA ROWE.
Greece, August 3, 1836.

Monroe Horticultural Garden and Nurseries, GREECE, MONROE CO. N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer. ASA ROWE.
oct 1

Chinese Mulberry Trees and Cuttings.

THE best varieties of CHINESE MULBERRY, (Morus Multicaulis) from *France*, *Italy* and *China*, of *one*, *two* and *three* years' growth, may be had in large or small quantities, from S. WHITMARSH'S extensive collection, and forwarded to any part of the United States, according to order, with directions for propagation.

It is confidently believed, that the present mode of culture adopted by us, will prove a certain and secure protection against the severity of winter, and the best method, by which, to increase the foilage and multiply the number of trees.

All orders directed to the subscriber, will receive immediate and faithful attention.

In behalf of S. WHITMARSH,
DANIEL STEBBINS.
Northampton Sept. 7. sept18-7t*

Albany Nursery.

BUEL & WILSON, advertize to their friends and the public, that they now have on hand a good supply of Pear and Plum Trees, embracing the best new varieties, selected with care in the London Nurseries, last winter, by one of the partners, and in fine condition for transplanting this fall. In addition to their ordinary assortment of Peach, Apple and other Fruit Trees, Forest Trees, Ornamental Shrubs, Green House Plants, Dahlias, &c. Their assortment of Dahlias and Roses is particularly choice and extensive. Orders respectfully solicited.

Sept. 14, 1836. 3w

ELECTION NOTICE.—*Sheriff's Office, Monroe County, Rochester, July* 23, 1836.—A general election is to be held in the county of Monroe, on the 7th, 8th and 9th days of November next, at which will be chosen the officers mentioned in the notice from the Secretary of State, of which a copy is annexed. ELIAS POND, Sheriff.

State of New-York, Secretary's Office, Albany, July 15, 1836.

Sir—I hereby give you notice that at the next general election of this state, to be held on the 7th 8th and 9th days of November next, a Governor and Lieutenant Governor are to be elected.

I also give you notice that a Senator is to be chosen in the Eighth Senate District in the place of John Griffin, whose term of office will expire on the last day of December next.

JOHN A. DIX, Secretary of State.

To the Sheriff of the county of Monroe.

N. B.—The Inspectors of Election in the several towns in your county will give notice of the election of a Representative to Congress from the 28th Congressional District, and that 42 Electors of President and Vice President are also to be chosen at the general election aforesaid. They will also give notice of the election of Members of Assembly, and for filling any vacancies in county offices which may exist. july26